Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

GEOGRAPHICAL RECORD.

THE WEST INDIES.

RENEWED VOLCANIC ACTIVITY.—The succession of violent eruptions of Mont Pelé, following the destruction of St. Pierre, Martinique, on May 8 last, culminated on August 31, after a period of comparative quiescence, in a terrific outburst, that laid waste a far larger area than was embraced in the district devastated on May 8. Professor Angelo Heilprin writes from Martinique that the destructive blast, instead of confining itself to a section (mainly west and southwest of Mont Pelé in the first eruption), was distributed radially, crossing the low summit of the volcano near the knob of Morne Jacob, and skipping zones between its rays. The area of destruction was distributed all over the northern end of the island, with the volcano approximately at its centre. A number of towns were destroyed, including Morne Rouge. The victims are believed to number about 2,000, death resulting, in most cases, from contact with the terribly swift and hot blast, which burned and suffocated. The electrical illuminations during the storm were remarkable. Perhaps no position in the north of the island is safe. The Government has ordered the evacuation of all points within a radius of about eight or ten miles of the crater. A very violent eruption of La Soufrière, St. Vincent, occurred on September 3.

AUSTRALIA.

IRRIGATION IN AUSTRALIA.—For several consecutive years Australia has suffered severely from drought. The evil effects have naturally been cumulative, and Australian newspapers say that, unless relief speedily comes, years will elapse before the agricultural and stock-raising interests of the Commonwealth can regain the prosperity they enjoy under more favourable conditions of climate. The development of the irrigation by means of artesian wells is in constant progress, but this resource is as yet adequate for the needs of only a small part of the fields, flocks, and herds. The following facts are condensed from a paper on the economic geography of Australia, by Dr. Max Wiedemann, published in the *Verhandlungen* of the Berlin Geographical Society (1901, Nos. 8 and 9).

The river systems of the continent cannot be depended upon to supply much water for irrigation, because most of the tributaries of the large rivers, owing to evaporation and percolation, are waterless, or nearly so, for many months in the year, with the result that the stage of water in the main rivers is very low during the summer and autumn. There would now be very little irrigation if it had not been discovered that a great deal of the precipitation is not evaporated, but sinks through permeable strata to artesian reservoirs of varying depths. The large and small irrigation enterprises depend mainly upon tapping these reservoirs.

The work of boring artesian wells, begun in New South Wales in 1881, has been largely developed in Queensland, both at public and at private expense. Queensland has now about 350 artesian wells, extending in the form of a half circle through the middle part of the inland high plain. This line of wells stretches north and northwest from the upper course of the Darling to Hughenden, and then south and southwest to the sources of Diamantina Creek, where it ends. The larger part of the Queensland wells are along this half circle, where the depth of the borings varies from 100 to nearly 1,000 feet; but in some places the borings have been sunk to depths of 1,800, 2,500, and 3,000 feet. The water-yield varies greatly; the majority of the wells supply each 100,000 or more gallons a day, and some wells yield one, three, and four million gallons a day.

There are fewer artesian wells in New South Wales, most of them being along the Darling river, near Bourke, and on the middle Macquarie, near Warren. Comparatively few wells have thus far been sunk in the States of Victoria, South Australia, and West Australia. Much more artesian water is used for the flocks and herds than is spread through the grain fields and fruit farms. No attempt has yet been made to water extensive areas, as has been done in California. It remains to be proved whether the underground sources will supply so much water that large areas may be made highly valuable, as in the fruit region of southern California; but at any rate, through the provision of abundant supplies of drinking water a wide extent of formerly useless country has been opened to stock-raising.

AFRICA.

SOUNDINGS IN LAKE NYASSA.—Lieutenant Rhoades, of the British Navy, has supplemented his careful survey of the coast-lines of Lake Nyassa by an extensive series of soundings that have revealed the general conformation of the lake bottom. It is found to be fairly level over large areas, especially in the northern part of the lake. The depths vary more or less in accordance with the steepness of the coast-lines, being greatest in those parts of the rift valley where the sides have the character of fault-scarps. The soundings of from 100 to 200 fathoms cover about two-thirds of the lake's area, the maximum depth found being 386 fathoms. If greater depths are found they will indicate only a narrow trough or depression of limited area. The nature of the bottom, recorded at each sounding, was nearly everywhere mud, with black sand and rock, found only in small areas. Nine sections across the lake, drawn along the parallels of latitude at intervals of thirty geographical miles, indicate, in a general way, the actual contour of the lake bottom. This explorer's map of Lake Nyassa, based upon his survey of the coast-lines, was published in the *Geographical Journal* in December, 1898; the map, showing the results of his soundings, appears in the same publication (July, 1902). As they are a decided advance on all earlier maps of the lake, they are to be recommended to cartographers.

THE CAPE TO CAIRO RAILROAD.—The London *Times* announces that the section of the Cape to Cairo railroad, from Bulawayo to the Zambesi river, 275 miles in length, is expected to be opened next year. Trains will then run from Cape Town to the Victoria Falls of the Zambesi—a distance of nearly 1,700 miles. The route has been surveyed as far as Victoria Falls, where a long steel bridge, having one span of 500 feet, will carry the line across the Zambesi. On this northern section the earthworks are practically completed for fifty miles, bridges are building, and rails have been laid for several miles. Meanwhile the preliminary steps are being taken to build the line north of the Zambesi, and a survey party has been sent over the route beyond Victoria Falls as far as Lake Tanganyika.

The railroad extending northeast from Bulawayo to connect that town with Salisbury, the chief station in Mashonaland, is also making rapid progress. The road is building both from Bulawayo and Salisbury, and, when the sections are united, Bulawayo will have another outlet to the sea by way of Salisbury and the Portuguese port of Beira, which now has rail connection with Salisbury.

STUDYING THE LAKE CHAD REGION.—Since the success of the French campaign against Rabah, who had for years controlled the region of Lake Chad, the French have been engaged in pacifying and organizing the country, and at the same time preparing to make a scientific study of this central portion of the Sudan. An expedition has been sent under the command of Professor A. Chevalier to Lake Chad and its greatest tributary, the Shari river, to study in detail the natural resources of the country and the prospects for commercial development. It is expected that the party will be in the field at least two years.

MAJOR AUSTIN'S JOURNEY FROM OMDURMAN TO MOMBASA VIA LAKE RUDOLF.—*The Geographical Journal* has published (June, 1902) Major Austin's narrative of this very remarkable journey, involving the greatest hardships. The journey occupied from December 15, 1900, to August 26, 1901, and covered 2,400 miles of travel, by steamboat on the Nile and Sobat, a land march from the Sobat to the Uganda railroad at Lake Nakuro, and thence by rail to Mombasa. The land march, about 1,200 miles, occupied from January 14 to August 21, during which time the expedition, numbering sixty-two men, with camels, mules, and donkeys, was threatened with destruction by thirst, hunger, and hostile natives. As it was, two-thirds of the black personnel was lost. The expedition followed the west shore of Lake Rudolf for about two-thirds of its length. The general direction of the journey on the Nile steamboats was south; that of the land march and the railroad journey, southeast.

The country through which the expedition marched from Fort Nasser, on the Sobat, to the Uganda railroad, has a few distinctive geographical features. Beginning the land march, the party left behind the swampy regions of the Nile. Far to the east, and extending north and south, were the Abyssinian highlands, glimpses being obtained in February of the lofty mountains that crown them. Though at a great distance, Major Austin was able to fix approximately the heights of some of the mountains, the loftiest being over 8,000 feet, and others from 7,000 to 8,000 feet, above sea-level. Between this Abyssinian plateau and the Nile is a plain several hundred miles in width, comparatively level in large areas, swampy along the rivers, and here and there interspersed with small ranges of mountains rising abruptly from the surrounding country. The zone of scanty rainfall—due, it is supposed, to the condensation and precipitation of most of the water while the rain-clouds are passing over the Abyssinian highlands—was entered a little south of 6° N. Lat.; here are regions of waterless desert, bordered, however, by some mountain districts with summits from 3,000 to 6,000 feet in height, which condense considerable water vapour and show expanses of fertile soil. The Omo river, which empties into the north end of Lake Rudolf, and is the only perpetual feeder of the lake, is the finest river in this part of Africa. Its banks are covered with excellent timber, and parts of the valley are extensively cultivated. Swamps, plain, desert, detached mountain ranges, and some not very extensive wood lands are the characteristic features of the country from the Nile to the fine highlands of British East Africa, among which the land journey came to an end.

The country traversed is rather sparsely peopled, and the natives are suspicious and very shy, which is not to be wondered at, as they are constantly raided by the Abyssinians. Quite a number of stragglers from the expedition were speared to death by hostile natives, who sometimes followed the party for days. After the failure of food supplies, nearly all the donkeys and camels were eaten, and at some critical periods it seemed as though all the members of the party were destined to perish.

POLAR.

THE BRITISH SOUTH POLAR EXPEDITION.—The steam yacht *Morning*, purchased and fitted out by the Royal Geographical Society at a cost of over $100,000, sailed from the Thames on July 9 *en route* for New Zealand, whence she will depart for Victoria Land to carry supplies to the British expedition on the *Discovery*. A freezing-chamber, built on deck, will be filled in New Zealand with mutton, so that the explorers of the advance expedition may have a supply of fresh meat. Other provisions and a large quantity of coal will also be taken to the *Discovery*. The *Morning* is under the command of Captain Colbeck, of the Royal Navy Reserve, who had charge of the observations on the Southern Cross expedition to the Antarctic. He has twenty-eight men in his crew. Although the main object is to act as a tender to the advance party, the *Morning* has a scientific equipment, and is expected, as far as possible, to supplement the work of the *Discovery*. If the *Discovery* is not found on the east coast of Victoria Land, the *Morning* is not to follow her into unknown regions, but to cache the supplies at Capes Crozier and Adair and Wood Bay, and return to Lyttelton, N. Z., where she would be expected to arrive in March or April next year.

THE BALDWIN-ZIEGLER EXPEDITION TO FRANZ JOSEF LAND.—This party, which was fitted out at great expense in 1901 to undertake the discovery of the North Pole, with Franz Josef Land as a base of operations, has returned to Europe at the end of its first year without having advanced beyond the known regions of that archipelago. It established three depots of food supplies north of Camp Ziegler, the winter quarters, but in this work most of the dogs died, and the sledges were destroyed; and the depletion of the food supplies and coal remaining at Camp Ziegler led to the return of the expedition.

SVERDRUP'S ARCTIC WORK.—The *Fram*, Captain Otto Sverdrup, returned to Norway in September, after four years of Arctic service. Captain Sverdrup's telegraphic report of his work (London *Times*, Sept. 22) shows that the expedition was very successful in making new discoveries along the south coast of Ellesmere Land and the west coast to lat. 81° N., a little beyond Greely Fiord; also new islands were discovered in the hitherto unknown area north of the Parry Islands. The work cannot clearly be described until the publication of Sverdrup's map, when it will be easy to trace the extent of coast-lines, the ramifying fiord systems, and the new islands he has discovered. It will suffice in this place to indicate the main features.

The earlier reports, that a large part of southern Ellesmere Land is covered by an ice-cap, are confirmed by Sverdrup's sledge journeys. Another journey across Ellesmere Land further north was across country free from ice.

The south coast of Ellesmere Land extends further to the west than it is represented on the maps. The sound between North Kent Island and Ellesmere Land is, therefore, narrower than it was supposed to be. The current through this sound is rapid, and passage was not easy either by open water or when it was filled with rugged ice.

On the west coast of Ellesmere Land, north of the sound, between Ellesmere Land and North Kent, is a large bay, extending eastward, and 100 miles in breadth. On the north side of the bay, about 50 miles east, are large fiords; north of the bay the coast runs in a north and northwesterly direction, and is very hilly and intersected by large fiords, some of which are 15 to 20 miles wide at the mouth. Above the 81st degree the land extends in a northerly direction.

Various islands were discovered to the north of North Cornwall. The south coast of one of them was followed westward, then northward, then in a northwesterly direction to lat. 79° 30′ N. and long. 106° W., when the land turned eastward and southward. No other land could be seen from the west or north coasts. Only the rough ice of the Polar Sea spread away in these directions.

The *Fram* spent the winter of 1898–99 frozen in the ice in Smith Sound; that of 1899–1900 in Jones Sound, and the winters of 1900–01 and 1901–02 near the southern end of Cardigan Strait, further west.

A MAGNETIC SURVEY OF INDIA.—The Government of India has decided to carry out a magnetic survey of that country under the direction of Colonel Gore, the Surveyor General, and Mr. John Eliot, the official meteorologist. The undertaking was suggested by the Royal Society in view of the tentative hypothesis advanced by Sir Norman Lockyer that sun spots have an influence not only upon the magnetic forces of the earth but also upon meteorological phenomena, and, therefore, indirectly upon the great famines that afflict India (*Peterm. Mitt.*, 1901, p. 214).

A PUBLICATION under the title: Veröffentlichungen des Instituts für Meereskunde und des Geographischen Instituts an der Universität, Berlin, edited by Dr. von Richthofen, is to be devoted to wide aspects of oceanography. It will appear at irregular intervals, and without arrangement in volumes. The first to be printed is "Deutsche Südpolar-Expedition auf dem Schiffe Gauss unter Leitung von Erich Drygalski." Later issues will contain "Die nordwest-europäischen Welthäfen in ihrer Verkehrs- und Handelsbedeutung," by Dr. K. Wiedenfeld, and "Untersuchungen über den Einfluss des nordatlantischen Ozeans auf die Witterungsanomalien der nördlichen Hemisphäre," by Dr. W. Meinardus.

THE STUDY OF THE SEA.—For three years plans have been forming for international participation in the study of the sea and fisheries. The special field of study will be the seas along the northwest and northern shores of Europe. All the North Sea Governments are to take part, excepting France.

The first meeting of delegates from the countries interested was held in Stockholm in July, 1899; the second in Christiania in May, 1901, and the third at Copenhagen on July 22 last, when the International Council for the Study of the Sea was organized. The delegates were scientific men from the various countries, Germany being represented by Dr. Herwig, President of the German Sea Fisheries Association, and Prof. O. Krümmel, of Kiel; Great Britain by Sir Colin Scott Moncrieff and Prof. D'Arcy Thompson, accompanied by Dr. H. R. Mill and Mr. W. Garstang, as expert advisers; Holland by Dr. P. P. C. Hoek; Denmark by Captain Drechsel and Drs. Knudsen and Petersen; Norway by Dr. Nansen and Dr. Hjort; Sweden by Dr. O. Pettersson and Dr. Tryhom; Russia by Dr. Knipovich, and Finland by Prof. Homén and Dr. Nordqvist.

The *Geographical Journal* (Sept., 1902) says that the recommendations of the Christiania conference for oceanographical work (*Bull. Amer. Geog. Soc.*, 1901, p. 353) were adopted, with a few slight variations. The principle of simultaneous observations four times a year as the basis of a system of regular observations of temperature, density, and plankton was approved.

The ships which Great Britain will devote to the work will make periodical trips in the Faroe-Shetland Channel and across the north end of the North Sea, working from a central harbour in Shetland; also simultaneous trips in the west part of the English Channel. The Dutch will take the southern and the Germans the northern half of the North Sea; Denmark will investigate the waters between Faroe and Iceland; Norway will take the North Atlantic off the western seaboard of Scandinavia; Russia will do similar work along the Murman coast and across Barents Sea to Novaya Zemlya; while the Baltic will be studied in detail by Danish, Swedish, Finnish, Russian, and German vessels. It is intended to connect these periodical trips with observations at fixed stations, such as lightships, and also to co-operate, as far as surface observations are concerned, with regular lines of steamers crossing the North Sea and the Atlantic.

Among the leading questions to be studied will be the migrations of such fish as the cod and the herring; the whole question of overfishing in the parts of the North Sea most frequented by trawlers will be carefully investigated. This question deals with the possibility of the resources of the sea becoming exhausted by continuous fishing, and the report upon it may afford a basis for international action in protecting threatened areas. All publications will be issued at Copenhagen, the seat of the Central Bureau of the Council, of which Dr. Herwig is president. The International Laboratory has been established at Christiania, with Dr. Nansen as honorary director and Dr. Walfrid Ekman as assistant for physical work. It was recommended that the laboratory be opened in October, and that the periodical cruises begin, at the latest, in the spring of next year.

GENERAL.

REFORMING THE JAPANESE SCRIPT.—The opinion is constantly growing in Japan that the Chinese script, used in the written language of Japan, impedes the efforts to reach the intellectual plane of the most advanced nations. A movement in favor of substituting the Roman script was started in 1885 by the Romaiji-Kwai, a society organized to promote the reform. Little ground was gained, however, and the society was dissolved after printing a periodical in Roman type for a number of years. A new movement, in progress since 1899, under the direct encouragement of the Department of Education, aims at the gradual suppression of the Chinese script, the chief means of effecting this end being to teach the school children to read the Japanese written language in Roman type. A more far-reaching movement still is that which aims ultimately at the fusing of the spoken and written languages, so that the literary and colloquial tongues shall be practically the same, and expressed on the printed page in Roman type.

A NEW HOUSE FOR THE ROYAL GEOGRAPHICAL SOCIETY.—In his recent address before the Royal Geographical Society (*The Geog. Jour.*, July, 1902), the President, Sir Clements R. Markham, said that, having equipped and despatched an expedition for South Polar research, the next work would be the building of a new and much-enlarged home, to replace the cramped quarters to which the Society has long been confined. The library is overflowing into every room, it is increasingly difficult to find space for the map collection or to make the maps accessible, and the work of the draughtsman and other employees is embarrassed by lack of room. He felt confident that the Fellows would support the Council when it should adopt measures for the erection of a more adequate building.